

Amendment Dated June 4, 2008
Serial No. 10/757,139

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IN THE CLAIMS

Claim 1. (Currently Amended) A method of controlling the dissemination of routing information on a communication network, the method comprising the steps of:

receiving a link state advertisement by a node from the network, the link state advertisement containing link state information;

~~ascertaining distance information associated with at least one of the link state advertisement and link state information contained in the link state advertisement determining, from the link state information, whether the link state advertisement should continue to propagate on the network based on whether the link state information contained in the link state advertisement is relevant; and~~

selectively forwarding the link state advertisement on the network. if the link state information is relevant based on the distance information without regard to an identity of a network element that initiated the link state advertisement.

Claim 2. (Currently Amended) The method of claim 1, wherein the step of selectively forwarding comprises:

forwarding the link state advertisement on the network where the step of determining distance information indicates that the link state advertisement is likely to be relevant to other nodes on the network and not forwarding the link state advertisement on the network where the distance information indicates the link state advertisement is not likely to be relevant to other nodes on the network.

Claim 3. (Currently Amended) The method of claim 1, wherein the step of selectively forwarding comprises:

forwarding the link state advertisement on the network if the link state information contained in the link state advertisement contained link state information that was relevant to the node, and not forwarding the link state advertisement on the network if the link state information contained in the link state advertisement contained information that was not relevant to the node.

Claims 4-5. (Canceled)

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Claim 6. (Currently Amended) The method of claim 1, wherein the step of determining includes determining a distance information is measured by the sum of link costs from the link state information.

Claim 7. (Currently Amended) A network topology, comprising:

a plurality of OSPF routers interconnected in a network and belonging to an OSPF area, said plurality of OSPF routers being configured to selectively forward link state information at the dissemination of Link State Advertisements (LSAs) within the OSPF area by evaluating link state information contained in the LSAs to determine the relevance of the link state information on the network forwarding LSAs according to distance information carried by the LSAs and without regard to an identity of a network element that initiated the link state advertisement, such that not every OSPF router within the OSPF area receives every LSA.

Claim 8. (Original) The network topology of claim 7, wherein the plurality of OSPF routers are interconnected in an ad-hoc wireless mesh network.

Claim 9. (Original) The network topology of claim 7, wherein the network is configured such that LSAs are disseminated only a predefined distance within the OSPF area.

Claim 10. (Original) The network topology of claim 7, wherein a subset of the OSPF routers are focal nodes.

Claim 11. (Original) The network topology of claim 10, wherein the network is configured such that LSAs are disseminated only a predetermined distance within the OSPF area.

Claim 12. (Original) The network topology of claim 11, wherein the predetermined distance is selected such that each LSA is received by at least two focal nodes.

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Claim 13. (Original) The network topology of claim 11, wherein nodes on the network other than focal nodes are configured to maintain a routing table containing information obtained from LSAs, said routing table containing information associated with at least two focal nodes.

Claim 14. (Original) The network topology of claim 10, wherein the focal nodes are area border routers to an OSPF backbone area.

Claim 15. (Original) The network topology of claim 14, wherein the focal nodes on the OSPF backbone area are configured to disseminate link state information for nodes in their local area, their local area being defined as that portion of the network from which the focal nodes receive LSAs.

Claim 16. (Currently Amended) A network node, comprising:

ports interconnected by a switch fabric to enable the network node to communicate on the network; and

control logic configured to inspect a link state advertisement received from a network, ascertain ~~distance information associate with~~ link state information from the link state advertisement, determine a relevance of the link state information; and selectively drop the link state advertisement if the ~~distance~~ link state information is not relevant ~~exceeds a predetermined metric, wherein the control logic does not consider an identity of a network element that initiated the link state advertisement in connection with selectively dropping the link state advertisement.~~

Claim 17. (Canceled)

Claim 18. (Currently Amended) The network node of claim 16, wherein the ~~metric~~ relevance is a sum of link costs associated with the link state advertisement.

Claim 19. (Currently Amended) The network node of claim 16, further comprising a routing table, and wherein the control logic is further configured to update information in the routing table from the link state information contained in the link state advertisement if the link state information is determined to be relevant.

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Claim 20. (Currently Amended) The network node of claim 16, further comprising a routing table, and wherein the control logic is further configured to update information in the routing table from the link state information contained in the link state advertisement, and wherein the control logic is configured to selectively drop the link state advertisement if the link state information contained in the link state advertisement is not likely to be relevant to another ~~router~~ node on the network.